



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/782,451

02/19/2004

Hans-Peter Foser

IVd15US

5190

7590
John C. Thompson
69 Grayton Road
Tonawanda, NY 14150

11/10/2008

EXAMINER

BALLINGER, MICHAEL ROBERT

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

11/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/782,451	Applicant(s) FOSER ET AL.	
	Examiner MICHAEL R. BALLINGER	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-17, 19-22 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17, 19-22 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/30/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 23, 2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 20-22 and 24-29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The Examiner notes the preamble of claim 20 includes the phrase "...consisting essentially of the steps of...", however; claims 24-29 includes specific recitations of the phrase "further comprising the step of". The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. In re Herz, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). Therefore, the recitation of additional steps in the dependent claims has made it unclear to the Examiner precisely what the Applicant has attempted to claim as the invention. In order to examine the application on its merits, the Examiner has interpreted the scope of claim 20 to be non-exclusive as evidenced by the dependent claims 24-29.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12, 14-17, 19-22, 24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braiman (US 5,346,397) in view of Fisher et al. (US 6,183,256).

7. As to claims 1 and 20, Braiman discloses a dental restoration comprising a base structure (13) which has both inner and outer contours (as seen in Figure 3), and which is adapted to be placed over a prepared tooth stump (column 3, lines 53-54); a prefabricated (column 4, lines 5-6) comparatively hard (column 2, line 25) over structure (10/11) in the form of a molar or pre-molar which has an inner contour that at least partially covers the outer contour of the base structure when assembled (see especially Figure 3), wherein the over structure has at least one pre-configured bite element on an outer contour thereof (i.e. top portion of over structure, Figure 3); and an interconnecting element (i.e. 14) for coupling the base structure and the over structure with one another (Figure 3), wherein the restoration can be constructed so that it does not need to be fired since Braiman discloses that a catalyst can be used to cause the components of the restoration to harden by photo-initiation (column 3, lines 65-67). However, Braiman fails to explicitly disclose that the interconnecting material is light-polymerizable. Fisher et al. teaches a dental restoration and method for producing said restoration in which the restoration comprises a base structure (16), an over structure (22) and a coupling element referenced as intermediary

Art Unit: 3732

layer (18,20,21) whereby said coupling element includes an interconnecting material (21) that is light-polymerizable (column 4, lines 25-33; column 5, lines 32-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to make the interconnecting material of Braiman light-polymerizable in order to easily and quickly harden it for bonding to the over structure, and consequently avoid a time consuming firing of the assembly. Examiner furthermore remarks that in regard to claim 1, it should be noted that Applicant is claiming an article of manufacture and not the process of forming/making the device. Accordingly, the manner in which the device is formed in claim 1, i.e. not requiring a time consuming firing of the assembly, is considered a product-by-process claim and is hence given little patentable weight since the final dental restoration product is shown as described above.

8. As to claim 2, the over structure of Braiman includes a covering element (i.e. side portions of 10/11) that is interconnected with the bite element and covers over at least one of a lingual, buccal, mesial, and distal region of the base structure, the covering element being interconnected to the base structure via the interconnecting material (Figure 3). As to claim 3, the interconnecting material extends in a surface covering manner between the base structure and the over structure and the interconnecting material fills the area between the base structure and the over structure (Figure 3). As to claims 4 and 21, Figure 3 shows the over structure has an inner contour that is compatibly configured with respect to an outer contour of the base structure; and the inner contour of the over structure and the outer contour of the base have respective circular shapes. As to claim 5, the bite element extends over the teeth of a dental patient receiving the restoration and is configured as a single member component (Figure 3). As to claim 6, it can be

Art Unit: 3732

seen from Figure 3 that the restoration extends to preparation borders of the teeth and the covering element covers the medial and distal sides of the teeth. As to claims 7 and 24, the over structure partially covers the base structure and the uncovered portion of the base structure is covered by an opaque material (column 3, lines 50-51).

9. As to claims 8 and 26, Figure 3 of Braiman shows the over structure partially covers the base structure and the uncovered portion of the base structure is covered by the interconnecting material. As to claims 9 and 10, the over structure is formed by the bite element and the covering element and the covering element is comprised of ceramic (column 4, line 29-31) or plastic (column 3, lines 63-64). As to claim 11, Fisher further teaches the covering element can be made of aluminum oxide ceramic or zirconium oxide ceramic (column 1, lines 40-47 & column 2, lines 19-34). As to claim 12, the interconnecting material is comprised of ceramic (column 3, lines 50-51). As to claim 14, the base structure is a metal frame (column 3, line 50). As to claim 15, Figure 13 shows the dental restoration is configured for a pre-molar or a molar. As to claim 16, the bite element of the over structure forms a tooth protuberance (Figure 3). As to claim 17, the over structure is a single member component and the bite element and the covering element are comprised of the same material (Figure 3). As to claims 19 and 27, Figure 3 shows that the base structure is capable of being securable to a peg supported by a jaw of a patient and an attachment element operable to be secured to neighboring tooth structures (i.e. via exposed interconnecting material between the over structure and base structure). As to claim 22, Figure 3 shows the step of pressing the over structure onto the interconnecting material. With respect to claims 28 and 29, Braiman discloses the dental restoration as previously described but fails to disclose the step of cleaning a spillover of interconnecting material after the step of pressing the

Art Unit: 3732

over structure onto the material. However, it would be an obvious matter of choice to one having ordinary skill in the art at the time of applicant's invention to clean said spilled interconnecting material so that desired shape of the dental restoration can be preserved in order to properly fit it within a patient's mouth.

10. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braiman in view of Fisher et al., as applied to claim 20 above, and further in view of Sozio et al. (US 4,585,417).

11. Braiman and Fisher et al. disclose the dental restoration as previously described but fail to disclose evaluating a prospective bite situation and manipulating the base structure and over structure relative to one another in an evaluation device such as an articulator. Sozio, however, teaches a method of making dental restorative device (Abstract) that is manipulated by using an articulator (column 7, lines 60-64) to simulate jaw movement and hence evaluate a prospective bite situation. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to evaluate a prospective bite situation and manipulate the base structure and over structure relative to one another using an articulator in order to simulate proper jaw movements as taught by Sozio.

Response to Arguments

12. Applicant's arguments filed June 23, 2008 have been fully considered but they are not persuasive.

13. Per the U.S.C. 103(a) rejection on page 9 of the remarks, Applicant first argues "Braiman does not suggest that when his over structure is placed over the base structure that it does not need to be fired." The Examiner respectfully disagrees. It is assumed from Applicant's arguments and amendments that the change to "consisting essentially of" in both claims 1 and 20

Art Unit: 3732

was intended to limit the claim by not requiring “a time consuming firing”. The language of each of this claims in their present form fail to impart this limitation for multiple reasons.

14. Per claim 20, the Examiner notes, “consisting essential of the steps of” limits the scope of a claim to the specific steps “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original). Also, for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, “consisting essentially of” will be construed as equivalent to “comprising.” See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. While the instant application offers a specific step to be excluded, “a time consuming firing” the applicant has not fulfilled the burden of showing that the introduction of additional steps would materially change the characteristics of the applicant's invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). In addition, the “firing” of Braiman’s for a period of 2 minutes (column 3, line 40) is being construed by the Examiner as a **not** a “time consuming firing”; moreover, the language of the claim does not explicitly prohibit **all** firing only that which would be construed as “time consuming”.

15. Per claim 1, the Applicant is reminded of the interpretation “time consuming firing” of the limitation as a product-by-process claim, presented in the previous office action and reiterated above. In the context of an apparatus claim such limitations are given little patentable weight. Furthermore, the phrase “consisting essentially of” as it is presented in the apparatus claim 1, would require a clear indication in the specification or claims of the **specific materials** that do not materially affect the basic and novel characteristics (*In re Herz*, see reference above).

Art Unit: 3732

Therefore, the phrase "consisting essentially of" has been construed as equivalent to "comprising" (PPG, see reference above). Secondly the applicant has argued "the 'coupling element' according to Fisher cannot be compared with the inventive coupling element made of only one (light-polymerizable material) which can be furthermore light-cured in-situ." The Examiner respectfully disagrees and submits claim 1 as presented does not explicitly constrict the interconnecting material to be comprised of only one material because the instant applicant is void any indication of how the silane of Fisher materially effects the claimed invention.

16. Next, Applicant argues "Braiman knew of light curable compounds, as he used them in the shell molding materials, but he never hints at using such a material for interconnecting material 14." The Examiner respectfully disagrees and notes "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

17. Applicant then argues the interconnecting material of Fisher would not have the dampening effects as disclosed in the instant application. This assertion has been dually noted; however, Applicant is reminded although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. BALLINGER whose telephone number is

Art Unit: 3732

(571)270-5567. The examiner can normally be reached on Monday-Friday 7:30 A.M to 5:00 P.M. EST.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571)272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R. Ballinger/
Examiner, Art Unit 3732

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732